

Title (en)

INK CARTRIDGE AND PRINTER USING THE SAME

Title (de)

FARBSTOFFBEHÄLTER UND DIESEN VERWENDENDES DRUCKGERÄT

Title (fr)

CARTOUCHE D'ENCRE ET IMPRIMANTE UTILISANT LADITE CARTOUCHE

Publication

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Application

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Abstract (en)

[origin: WO0026034A2] In an ink jet printer of the present invention, in order to reduce the manufacturing cost, an inexpensive EEPROM enabling only sequential accesses is applied for storage elements incorporated in a black ink cartridge and a color ink cartridge. The data array of a memory cell included in each of the storage elements mounted on the ink cartridges is determined in such a manner that a second storage area, in which rewritable data, for example, data on remaining quantities of inks in the ink cartridge, are stored, is accessed prior to a first storage area, in which read only data are stored. This configuration enables the rewritable data to be securely written into the second storage area even after a power-off operation. The second storage area has two memory divisions allocated to each ink, that is, a first ink remaining quantity memory division and a second ink remaining quantity memory division. Latest data on the remaining quantity of each ink is alternately written into these two memory divisions. Alternatively, the latest data on the remaining quantity of each ink is written into these two memory divisions in a duplicated manner. Each ink remaining quantity memory division has a write complete flag to determine whether or not a writing operation has been completed normally in the ink remaining quantity memory division. This arrangement enables the remaining quantities of the respective inks to be monitored accurately and continuously.

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WO 9852762 A2 19981126 - ENCAD INC [US]

Cited by

CN113677534A; US8366233B2; US8382250B2; US8454116B2; US8794749B2; US8801163B2; US8882513B1; US9180675B2; US9381750B2;  
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AU 6369099 A 20000522; AU 771461 B2 20040325; BR 9906715 A 20001017; CA 2316982 A1 20000511; CA 2316982 C 20080819;  
CA 2578128 A1 20000511; CA 2578128 C 20120717; CN 100360315 C 20080109; CN 102198756 A 20110928; CN 102198756 B 20140507;  
CN 1313274 C 20070502; CN 1383400 A 20021204; CN 1539644 A 20041027; DE 19964385 B4 20090102; DE 19982445 B4 20080228;  
DE 19982445 T1 20010510; DE 69928261 D1 20051215; DE 69928261 T2 20060601; EP 1097043 A2 20010509; EP 1097043 B1 20051109;  
ES 2249032 T3 20060316; GB 0015758 D0 20000816; GB 2347649 A 20000913; GB 2347649 B 20030528; HK 1050164 A1 20030613;  
KR 100512524 B1 20050905; KR 100583363 B1 20060526; KR 20030086974 A 20031112; KR 20050070145 A 20050705;  
MY 125897 A 20060830; MY 138001 A 20090430; MY 138350 A 20090529; NZ 505823 A 20021025; SG 138433 A1 20080128;  
US 2002057319 A1 20020516; US 2005174372 A1 20050811; US 2006268028 A1 20061130; US 6565198 B2 20030520;  
US 7195346 B1 20070327; US 7393092 B2 20080701

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BR 9906715 A 19991102; CA 2316982 A 19991102; CA 2578128 A 19991102; CN 200410034390 A 19991102; CN 201110127789 A 19991102;  
CN 99801995 A 19991102; DE 19964385 A 19991102; DE 19982445 T 19991102; DE 69928261 T 19991102; EP 99951202 A 19991102;  
ES 99951202 T 19991102; GB 0015758 A 19991102; HK 03102406 A 20030403; KR 20030074592 A 20031024; KR 20057009552 A 20050526;  
MY PI0403873 A 19991101; MY PI0403880 A 19991101; MY PI9904712 A 19991101; NZ 50582399 A 19991102; SG 2001066679 A 19991102;  
US 2555804 A 20041229; US 42563806 A 20060621; US 4312802 A 20020114; US 43227299 A 19991102